REMARKS

I. Status of the Claims

Claims 22-26 have been withdrawn.

Claims 2-18 have been amended. No new matter has been added.

Claims 1-26 are pending and claims 1-21 are presented for examination.

II. Objections to the Claims

Claims 3 and 2-21 have been objected to for misspelling the word "elastomer" in claim 3, and improper spacing between certain words in the first line of each of claims 2-21. Applicants respectfully submit that, unlike claims 2-18, claims 19-21 do not have improper spacing in the first line. Claims 3 and 2-19 have been amended to correct the informalities. Applicants submit that the claims have been amended to correct all informalities and respectfully request that the objections be withdrawn.

III. Provisional Double Patenting Rejection

The Examiner provisionally rejects claims 1, 3-6, 8-11 and 13-21 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-13 and 15 of copending Application No. 10/934,393 (the '393 application).

Applicants respectfully traverse this rejection. The '393 application was filed on September 7, 2004 and is the later filed application. An Office Action has not been received in connection with '393 application and Applicants presume that the '393 application has not yet been examined. A Terminal Disclaimer is not required for the present application. MPEP § 804(I)(B) states the Examiner must withdraw a provisional double patenting rejection in the first allowed application and allow the first filed application to issue:

> If the "provisional" double patenting rejections in both applications are the only rejections remaining in those applications, the examiner should then withdraw that rejection in one of the applications (e.g., the application with the earlier filing date) and permit the application to issue as a patent. The examiner should maintain the double patenting rejection in the other application as a "provisional" double patenting rejection which will be converted into a double patenting rejection when the one application issues as a patent.

Applicants respectfully submit that a Terminal Disclaimer is not required in the present application and, at the time the claims are in condition for allowance, request that the provisional double patenting rejection be withdrawn and the current application allowed to pass to issue.

IV. Rejections under 35 U.S.C. §112

Claims 2, 7 and 12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite. Specifically, the Examiner asserts that the term "comprises a single layer" is unclear. Office Action, dated December 14, 2004, p. 3, l. 23. Applicants respectfully traverse this rejection.

The Specification discloses and claims heat-resistant plastic tubes in multiple embodiments. Figure 1 depicts a single layer tube, whereas Figures 2-4 depict multi-layer embodiments. The "single layer" claimed by Applicants in claims 2, 7 and 12 is one "substantially made of polyester-based elastomer." Specification, p. 6, ll. 10-11. Applicants respectfully direct the Examiner's attention to further support for the single layer embodiment contained in the Specification at p. 15, ll. 4-23; pp. 17-18, ll. 25-7; and by pp. 20-24, Tables 1-4, examples 1-4.

Applicants submit that claims 2, 7 and 12 in light of Figure 1 and the Specification renders the meaning of "comprises a single layer" sufficiently clear such that a person having ordinary skill in the art, upon seeing the drawings and reading the Specification would understand the meaning of the term "comprises a single layer." Additionally, Applicants have amended claim 2 for clarity only and respectfully request that this rejection be withdrawn.

V. Rejections under 35 U.S.C. §103(a)

Claims 1-2 are rejected under 35 U.S.C. § 103(a) as being obvious over U.S. Patent No. 5,380,571 to Ozawa et al. (Ozawa). Specifically, the Examiner asserts that Ozawa teaches tubes having inner and outer layers of polyester elastomers. Office Action, dated December 14, 2004, p. 4, ll. 18-19. The Examiner contends that it "would have been an obvious matter of engineering choice to employ polyesters having suitable physical properties in the Ozawa tubes in order to tailor the tube's properties to the use for which they are intended." *Id.*, p. 4, ll. 22-25. However, the Examiner admits that Ozawa fails to teach the properties recited in claim 1. Applicants respectfully traverse this rejection.

Applicants submit that Ozawa teaches away from Applicants' claimed invention as Ozawa teaches that the outer layer of the hose are made from Santoprene or Sarlink, which is an ethylene-propylene(-diene monomer) copolymer rubber (EPDM) dispersed into polypropylene resin (PP), and the melting point is equal to that of polypropylene, which is about 170° C. Ozawa, Tables 1-3. Therefore, one of ordinary skill in the art would understand that the tubes in Ozawa cannot have a change amount in angle of $\pm$ 10° or less due to the nature of the rubber disclosed by Ozawa.

Further, Ozawa teaches that, "[a]s shown in FIG. 1, the hose 1 of the present invention is composed of, as essential constituents, an inner tube 2, a reinforcing layer 3 and an outer cover 4." Ozawa, col. 3, ll. 34-37. The reinforcing layer may be "a layer of a braiding or spiraling (or knitting) of yarns of a vinylon fiber, a rayon fiber, a polyester fiber, a poyamide (e.x. Nylon) fiber, an aromatic polyamide fiber, etc, or hard steel wires, in the same manner as the reinforcing layer of the hose according to the prior art." Ozawa, col. 6, ll. 5-11. One of ordinary skill in the art is aware that, based on the nature of the rubber and the reinforcing layers, Ozawa's rubber alone will display a change rate in inner diameter greater than ± 2% and a change rate in yield strength greater than ± 30% and cannot meet all the elements of the claims.

Further, Ozawa is silent on the ability of the hose to retain its shape. Instead, Ozawa relates to a reinforced multiple-layered "thermoplastic elastomer hose having excellent flexibility." Ozawa, col. 1, ll. 7-8. In addition to retaining flexibility, Applicants' claimed invention further "exhibits

excellent retention of shape" for use in "harsh environmental atmospheres, . . . , where a maximum temperature reaches as high as 150° C." Specification, p. 1, ll. 12-13; p. 3, ll. 6-8. Applicants accomplish this retention of shape based on the nature of the rubber.

Applicants submit that person having ordinary skill in the art, upon reading Ozawa, would not be taught or motivated that polyesters used in Ozawa can have the properties claimed in Applicants claim 1.

Applicants submit that claim 1 is not obvious in view of Ozawa. Claim 2 depends from claim 1 and is not obvious for at least those reasons stated in relation to claim 1 above. Accordingly, Applicants respectfully request that the rejection be withdrawn and the application be allowed to pass.

Claims 1-15 are rejected under 35 U.S.C. § 103(a) as being obvious over U.S. Patent No. 6,294,234 to Kertesz (Kertesz). The Examiner asserts that Kertesz teaches fuel conduits having thermoplastic crystalline polyester layers and thermoplastic elastomeric polyester layers which may alternate and wherein one of the layers can be conductive. Office Action, dated December 14, 2004, p. 5, ll. 1-6. Specifically, the Examiner contends that it "would have been an obvious matter of engineering choice to employ polyesters having suitable physical properties of the Kertesz conduits in order to tailor the tube's properties to the use for which they are intended." *Id.*, p. 5, ll. 9-12. However, the Examiner admits that Kertesz does not teach the properties recited in claim 1. *Id.*, p. 5, l. 8. Applicants respectfully traverse this rejection.

Nothing in Kertesz teaches or suggests that the fluid conduits might retain their shape, yield strength, or inner diameter dimensional stability at high temperatures. Applicants submit that one of ordinary skill in the art is aware that thermoplastic materials change shape in high heat. Nonetheless, the tube claimed by the Applicants "can be thermally bent at a temperature of the environment in which it is used or higher, and exhibits excellent retention of the shape after a thermal bending even if being left at the environmental temperature after the thermal bending." Specification, p. 1, ll. 10-14.

The unexpected properties of the Applicants' invention distinguish it from the fluid conduits of the cited prior art. The fluid conduits of Kertesz are used at unspecified temperatures and, as disclosed, emphasize "high flexibility" which suggests a certain ability to change—not retain—shape. Indeed, a person having ordinary skill in the art would not be motivated, upon reading Kertesz, to employ the fluid conduits for fuels and vapors in a high temperature environment and expect the tubes to retain their shape.

Claims 16-21 are rejected under 35 U.S.C. § 103(a) as being obvious over Kertesz as applied to claims 1-15 above, and further in view of U.S. Patent No. 5,960,977 to Ostrander et al. (Ostrander). The Examiner asserts that he understands the "surface resistivities of claims 16-21 to mean that the layers are conductive." Office Action, dated December 14, 2004, p. 5, ll. 21-22. The Examiner admits that the claimed resistivities of the inner layers of Kertesz are not taught but that Ostrander teaches tubing having an inner layer with a resistivity of 10^4 to 10^9 ohms/cm^2. *See, id.*, p. 6, ll. 3-5. Specifically, the Examiner contends that it "would have been obvious to one having ordinary skill in the art at the time of the invention to employ the conductive inner layers of Ostrander in the conduits of Kertesz in order to prevent static deterioration in the conduits." *Id.*, p. 6, ll. 10-12. Applicants respectfully traverse this rejection.

Applicants submit that 16-21 depend from claims 1, 3-5 and 13-16, and overcome the rejection based on Ostrander for at least those reasons presented in those arguments to Ozawa and Kertesz above.

In addition to the above, Applicants respectfully submit that the Examiner's reliance on Ostrander is misplaced. Ostrander teaches away from Applicants' invention. Ostrander teaches that conductive materials "may be selected from the group consisting of elemental carbon, stainless steel and highly conductive metals such as copper, silver, gold, nickel, silicon and mixtures thereof." Ostrander, col. 6, ll. 24-28. By contrast, Applicants disclose the properties of a conductive inner layer, as comparative example 3, in Tables 1-4 on pages 20-24 of the Specification. Applicants claim a tube made of thermoplastic materials. The tube having a conductive layer and disclosed by the Applicants in the Specification "was obtained by extrusion molding using an externally plasticized Nylon 12." Applicants submit that the conductive materials taught or suggested by

Ostrander do not teach or motivate one of ordinary skill in the art to use a plastic as the conductive layer.

In view of the above argument, Applicants respectfully request that the Examiner withdraw this rejection, and allow the application to pass.

CONCLUSION

In view of the above, each of the presently pending claims in this application are believed to be in condition for allowance.

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Respectfully submitted,

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